

Application No.: 09/911,819

Docket No.: MWS-077RCE2

**AMENDMENTS TO THE CLAIMS**

1. (Currently Amended) In a computing device, a method comprising:  
providing a definition of a function associated with a first language;  
creating description information about the function from the definition of a function associated with a first language;  
storing the description information in a storage device, where the description information allows the call to the function in the first language to be associated with a call to a corresponding function in a second language;  
identifying a call to the function in the first language;  
retrieving the stored description information for the function from the storage device; and  
translating ~~a~~ the call to the function in the first language into ~~thea~~ call to ~~thea~~ corresponding function in ~~thea~~ second language using the description information, ~~without wherein translating uses the description information instead of precessing the definition of the~~ function.
2. (Original) The method of claim 1, further comprising: storing the description information in a file of description items.
3. (Previously Presented) The method of claim 1, wherein creating description information about the function comprises: examining the definition of the function associated with the first language; and deriving information about the function.
4. (Cancelled)
5. (Previously Presented) The method of claim 1, further comprising: storing a translated function in the second language in a library of entries.
6. (Previously Presented) The method of claim 1, in which creating description information about the function comprises: deriving a number of declared formal inputs to the function.

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7. (Previously Presented) The method of claim 1, in which creating description information about the function comprises: deriving a number of declared formal outputs to the function.

8. (Previously Presented) The method of claim 1, in which creating description information about the function comprises: deriving a scope of the function.

9. (Previously Presented) The method of claim 1, in which creating description information about the function comprises: determining whether the function accepts a variable number of arguments.

10. (Previously Presented) The method of claim 1, in creating description information about the function comprises: determining whether the function returns a variable number of results.

11. (Currently Amended) In a computing device, a method comprising:

providing a file of description items, ~~each where one or more items include item~~  
~~including~~ description information about one or more functions associated with a first language,  
identifying a call to a function in the first language;  
retrieving an item from the file of description items;  
using wherein the description information for the function to enables translation- translate  
of a call to the function in the first language into a call to a corresponding function in a second  
language, wherein translating uses the description information instead of without requiring  
processing of the definition of the function; and  
using the file of description items to translate a first program file into a second program file.

12. (Original) The method of claim 11, wherein the description information about the function comprises: a descriptor identifying a declared number of formal inputs to the function.

13. (Original) The method of claim 11, wherein the description information about the function comprises: a descriptor identifying a declared number of formal outputs to the function.

14. (Original) The method of claim 11, wherein the description information about the function

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comprises: a descriptor identifying a scope of the function.

15. (Original) The method of claim 11, wherein the description information about the function comprises: a descriptor identifying an acceptance of a variable input argument list into the function.

16. (Original) The method of claim 11, wherein the description information about the function comprises: a descriptor identifying a return of a variable output argument list from the function.

17. (Currently Amended) The method of claim 11, further comprising: ~~wherein using the file of description items comprises: for each call to a function in the first program file, retrieving an item from the file of description items; using the description information in the item to translate the call to the function in the first language into a call to a corresponding function in the second language; and~~

storing the translated call in the second program file.

18. (Original) The method of claim 11, wherein using the file of description items comprises: generating a call through a function evaluation interface for the function if the description information includes a descriptor identifying an acceptance of a variable input argument list into the function.

19. (Original) The method of claim 11, wherein using the file of description items comprises: generating a call through a function evaluation interface for the function if the description information includes a descriptor identifying a return of a variable output argument list from the function.

20. (Original) The method of claim 11, wherein using the file of description items comprises: generating a call through a normal interface for the function if the description information includes a descriptor identifying a known number of input and output arguments to the function.

21. (Currently Amended) In a computing device, a method comprising:  
providing a library file including functions defined by a first language;

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creating a function library and a description file from the library file, the function library including one or more functions defined by a second language, each function in the function library being a translated version of a function in the library file, and the description file including description information about each function in the library file, wherein the description information enables translation of a call to the function in the first language into a call to a corresponding function in the second language, wherein translating uses the description information instead of without requiring processing of the definition of the function;

identifying a call to the function in the first language;

retrieving the description file; and

using the description file to translate a program file from the first language into the second language, wherein each call in the program file to a function in the library file is translated into a call to a corresponding function in the second language.

22. (Previously Presented) The method of claim 21, wherein creating a function library comprises: translating the call to each function in the library file into a call to a corresponding function in the second language.

23. (Currently Amended) The method of claim 21, wherein creating a ~~creating~~ description file comprises:

examining the definition of each function in the library file; and  
deriving information about each function.

24. (Previously Presented) The method of claim 23, further comprising: using the derived information about each function to create description information; and creating a description file including description information about each function in the library file.

25. (Original) The method of claim 21, wherein using the description file comprises: for each call in the program file to a function in the library file, retrieving the description information about the function from the description file; and using the description information to translate the call to the function in the first language into a call to a corresponding function in the second language.

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26. (Original) The method of claim 21, wherein using the description file comprises: generating a call through a function evaluation interface for the function if the description information includes a descriptor identifying an acceptance of a variable input argument list into the function.

27. (Original) The method of claim 21, wherein using the description file comprises: generating a call through a function evaluation interface for the function if the description information includes a descriptor identifying a return of a variable output argument list from the function.

28. (Original) The method of claim 21, wherein using the description file comprises: generating a call through a normal interface for the function if the description information includes a descriptor identifying a known number of input and output arguments to the function.

29. (Currently Amended) A computer program product, tangibly stored on a computer-readable medium, for creating a data file, the product comprising instructions operable to cause a programmable processor to:

obtain a definition of a function associated with a first language;

create description information about the function from the definition of the function

associated with a first language;

store the description information in a storage device, where the description information allows the call to the function in the first language to be associated with a call to a corresponding function in a second language;

identify a call to the function in the first language;

retrieve the stored description information for the function from the storage device; and

translate a the call to the function in the first language into a call to a the corresponding function in a second language using the description information, wherein translating uses the description information instead of without processing the definition of the function.

30. (Original) The product of claim 29, further comprising instructions operable to cause a programmable processor to: store the description information in a file of description items.

31. (Previously Presented) The product of claim 29, wherein creating description information

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comprises: examining the definition of the function associated with the first language; and deriving information about the function.

32. (Original) The product of claim 31, further comprising instructions operable to cause a programmable processor to: use the derived information to create the description information.

33. (Cancelled)

34. (Previously Presented) The product of claim 29, in which creating description information comprises: deriving a number of declared formal inputs to the function.

35. (Previously Presented) The product of claim 29, in which creating description information comprises: deriving a number of declared formal outputs to the function.

36. (Previously Presented) The product of claim 29, in which creating description information comprises: deriving a scope of the function.

37. (Previously Presented) The product of claim 29, in which creating description information comprises: determining whether the function accepts a variable number of arguments.

38. (Previously Presented) The product of claim 29, in which creating description information comprises: determining whether the function returns a variable number of results.

39. (Currently Amended) A product, stored on a machine-readable medium, for translating a program file, the product comprising instructions operable to cause a processor to:

provide a file of description items, where one or more each-items include including  
description information about one or more a functions associated with a first language,

identify a call to the function in the first language;

retrieve an item from the file of description items;

use the description information for the function enabling to translate translation-of-the  
call to the function into a call to a corresponding function in a second language, wherein

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translating uses the description information instead of ~~without requiring processing of the~~  
definition of the function; and

use the file of description items to translate a first program file into a second program file.

40. (Original) The product of claim 39, wherein the description information about the function comprises: a descriptor identifying a declared number of formal inputs to the function.

41. (Original) The product of claim 39, wherein the description information about the function comprises: a descriptor identifying a declared number of formal outputs to the function.

42. (Original) The product of claim 39, wherein the description information about the function comprises: a descriptor identifying a scope of the function.

43. (Original) The product of claim 39, wherein the description information about the function comprises: a descriptor identifying an acceptance of a variable input argument list into the function.

44. (Original) The product of claim 39, wherein the description information about the function comprises: a descriptor identifying a return of a variable output argument list from the function.

45. (Currently Amended) The product of claim 39, further comprising instructions operable to cause a programmable processor to: ~~wherein using the file of description items comprises: for each call to a function in the first program file, retrieving an item from the file of description items; using the description information in the item to translate the call to the function in the first language into a call to a corresponding function in the second language; and~~  
storestoring the translated call in the second program file.

46. (Original) The product of claim 39, wherein using the file of description items comprises: generating a call through a function evaluation interface for the function if the description information includes a descriptor identifying an acceptance of a variable input argument list into the function.

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47. (Original) The product of claim 39, wherein using the file of description items comprises: generating a call through a function evaluation interface for the function if the description information includes a descriptor identifying a return of a variable output argument list from the function.

48. (Original) The product of claim 39, wherein using the file of description items comprises: generating a call through a normal interface for the function if the description information includes a descriptor identifying a known number of input and output arguments to the function.

49. (Currently Amended) A computer program product, tangibly stored on a computer-readable medium, for translating function calls, the product comprising instructions operable to cause a programmable processor to:

provide a library file including functions defined by a first language;

create a function library and a description file from the library file, the function library including one or more functions defined by a second language, each function in the function library being a translated version of a function in the library file, and the description file including description information about each function in the library file, wherein the description information enables translation of a call to the function in the first language into a call to a corresponding function in the second language, wherein the translation uses the description information instead of without requiring processing of the definition of the function;

identify a call to the function in the first language;

retrieve the description file; and

use the description file to translate a program file from the first language into the second language, wherein each call in the program file to a function in the library file is translated into a call to a corresponding function in the second language.

50. (Previously Presented) The product of claim 49, wherein creating a function library comprises: translating the call to each function in the library file into a call to a corresponding function in the second language.

51. (Original) The product of claim 49, wherein creating a description file comprises: examining



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the definition of each function in the library file; and deriving information about each function.

52. (Original) The product of claim 51, further comprising: using the derived information about each function to create the description information; and creating a description file including description information about each function in the library file.

53. (Original) The product of claim 49, wherein using the description file comprises: for each call in the program file to a function in the library file, retrieving the description information about the function from the description file; and using the description information to translate the call to the function in the first language into a call to a corresponding function in the second language.

54. (Original) The product of claim 49, wherein using the description file comprises: generating a call through a function evaluation interface for the function if the description information includes a descriptor identifying an acceptance of a variable input argument list into the function.

55. (Original) The product of claim 49, wherein using the description file comprises: generating a call through a function evaluation interface for the function if the description information includes a descriptor identifying a return of a variable output argument list from the function.

56. (Original) The product of claim 49, wherein using the description file comprises: generating a call through a normal interface for the function if the description information includes a descriptor identifying a known number of input and output arguments to the function.